

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-24. (Canceled)

25. (New) A transmission device for transmitting data using four symbol values, the transmission device comprising:

a division unit configured to be inputted with original data arranged in order from one with highest importance, the original data comprising first data and second data after the first data, the first data being to be protected and the second data being to be unprotected, and to divide the first data into first bit data by one bit and divides the second data into second bit data by two bits;

a redundant bit addition unit configured to add a redundant bit as a lower order bit to each of the first bit data as a higher order bit to create 2 bits data which results in a symbol having any one of two symbol values whose gain is higher at the Nyquist point, of the four symbol values; and

a modulation unit configured to perform modulation on the basis of the first bit data with the redundant bit being added and the second bit data.

26. (New) The transmission device according to claim 25, wherein each of the first data to be protected comprises flag data.

27. (New) The transmission device according to claim 25, wherein the original data includes bits for error check and the first data to be protected includes the bits for error check.

28. (New) The transmission device according to claim 25, wherein the original data includes bits for error correction and the first data to be protected includes the bits for error correction.

29. (New) The transmission device according to claim 25, wherein the number of the first data to be protected is less than the number of the second data to be unprotected.

30. (New) The transmission device according to claim 25, wherein the original data represents a plurality of pieces of information, and the redundant bit addition unit operates for respective ones of the plurality of pieces of information to add the redundant bit to each of the first data to be protected to generate coded data.

31. (New) A reception device comprising:

a demodulation unit configured to receive and demodulate a transmission signal in which data has been transmitted using four symbol values, wherein the transmission signal is obtained by inputting original data arranged in order from one with highest importance, the original data comprising first data and second data after the first data, the first data being to be protected and the second data being to be unprotected, dividing the first data into first bit data by one bit and dividing the second data into second bit data by two bits adding a redundant bit as a lower order bit to each of the first bit data as a higher order bit to create 2 bits data which results in a symbol having any one of two symbol values whose gain is higher at the Nyquist point, of the four symbol values, and performing modulation on the basis of the first bit data with the redundant bit being added and the second bit data;

a symbol decision unit configured to perform a symbol decision at each Nyquist interval for the signal demodulated by the demodulation unit;

a bit conversion unit configured to convert a symbol value obtained by the symbol decision performed by the symbol decision unit into a bit value; and

a data recovery unit configured to compose a data string by deleting the added redundant bit from the data of the bit value converted by the bit conversion unit, to restore original data.

32. (New) The reception device according to claim 31, wherein the demodulation unit demodulates the received signal by converting the received signal into a signal of a voltage corresponding to a frequency of the received signal, and the symbol decision unit performs the symbol decision by comparing the voltage of the signal, which has been demodulated by the demodulation unit, with preset threshold values.

33. (New) A method for transmitting data using four symbol values, the method comprising the steps of:

inputting original data arranged in order from one with highest importance, the original data comprising first data and second data after the first data, the first data being to be protected and the second data being to be unprotected, dividing the first data into first bit data by one bit and dividing the second data into second bit data by two bits;

adding a redundant bit as a lower order bit to each of the first bit data as a higher order bit to create 2 bits data which results in a symbol having any one of two symbol values whose gain is higher at the Nyquist point, of the four symbol values; and

performing modulation on the basis of the first bit data with the redundant bit being added and the second bit data.

34. (New) A method for receiving data comprising the steps of:

receiving and demodulating a transmission signal in which data has been transmitted using four symbol value, wherein the transmission signal is obtained by inputting original data arranged in order from one with highest importance, the original data comprising first data and second data after the first data, the first data being to be protected and the second data being to be unprotected, dividing the first data into first bit data by one bit and dividing the second data into second bit data by two bits adding a redundant bit as a lower order bit to each of the first bit data as a higher order bit to create 2 bits data which results in a symbol having any one of two symbol values whose gain is higher at the Nyquist point, of the four symbol values, and performing modulation on the basis of the first bit data with the redundant bit being added and the second bit data;

performing a symbol decision at each Nyquist interval for the signal demodulated in the demodulating step;

converting a symbol value obtained by the symbol decision performed in the symbol deciding step into a bit value; and

composing a data string by deleting the added redundant bit from the data of the bit value converted in the symbol value converting step, to restore original data.